

APPARATUS AND METHOD FOR PHASE SYNCHRONIZATION CONTROL IN RZ OPTICAL TRANSMITTER

Abstract

An optical RZ transmitter comprises an optical signal source and a pair of
5 electro-optical modulators in tandem, one arranged to receive a NRZ electrical data
signal and the other a clock signal at the data rate of the data signal. The phase
difference between the data signal and the clock signal is controlled by adding a first
dither signal to a bias signal applied to the modulator receiving the data signal, and a
second dither signal, having a different frequency, to the phase difference. The
10 amplitude of variations in the power of the optical output signal corresponding to
cross-modulation of the first and second dither signals is detected and the phase
difference is controlled in response to the detected amplitude.